



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/830,049	08/29/2001	Sergey Artamonov	13109-002001	9655

20985 7590 10/15/2004

FISH & RICHARDSON, PC
12390 EL CAMINO REAL
SAN DIEGO, CA 92130-2081

EXAMINER

RAMAKRISHNAIAH, MELUR

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/830,049	Applicant(s) ARTAMONOV ET AL.	
	Examiner Melur Ramakrishnaiah	Art Unit 2643	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 6-38 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9-28-2004</u> . | 6) <input type="checkbox"/> Other: _____ |

Claim Objections

1. Claims 6-38, are objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim cannot depend from any other multiple dependent claim. See MPEP § 608.01(n). Accordingly, the claims 6-38 have not been further treated on the merits.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3, are rejected under 35 U.S.C 102(b) as being anticipated by Kobayashi et al. (EP 0723366 A2, hereinafter Kobayashi).

Regarding claim 1, Kobayashi discloses a parallel processor for estimating motion of a given portion of a current image frame with reference to a anchor frame comprising: an input in (200, fig. 2) for receiving a current frame of data, an input in (200, fig. 2) for receiving anchor frame of data, a two dimensional matrix of rows and columns processing elements each processing element for comparing a given area of the current frame (Pa, fig. 1) with at least an area of an anchor frame (Pb, Pc, fig. 1) wherein the matrix simultaneously compare s area (reads on a(m,n), fig. 1) of the current frame with an nk area (reads on b(m,n, fig. 1)) of the anchor frame, each column of processing elements (figs. 8, 10) simultaneously comparing one field of the current

Art Unit: 2643

frame data with nk fields of the anchor frame, and each row of the processing elements (figs. 8, 10) simultaneously comparing the s fields of the current frame data, with n fields of anchor frame, the matrix having dimensions of $K \times S$ and n being an integer, means as shown in fig. 1 for selecting from the comparison, for each area of the current frame, an area of the anchor frame corresponding to the area of the current frame, and means (400, fig. 2) for outputting data identifying selected area of the anchor frame (figs. 2-3, 8, 10, page 3, line 49 – page 4, line 3, page 7, line 49 – page 8, line 58, page 9, line 38 – line 41, page 12, line 43 – line 53).

Regarding claims 2-3, Kobayashi further teaches the following: matrix simultaneously compares S areas (reads on areas such as $a(m,n)$, fig. 1) of the current frame with $4k$ areas of the anchor frame (reads on areas such as $b(m,n)$, fig. 1 and figs. 8, 10), wherein areas of the anchor frame and current frame are all cosized macroblocks (fig. 1).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4-5, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi in view of Gallery et al. (WO 97/13220, hereinafter Gallery).

Art Unit: 2643

Regarding claim 4, Kobayashi does not explicitly teach the following: macro blocks comprise 16x16 pixels.

However, Gallery discloses graphic image manipulation which teaches the following: macro blocks comprise 16x16 pixels (see abstract)

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Kobayashi's system to provide for the following: macro blocks comprise 16x16 pixels as this arrangement would provide means for selecting required number of pixels for further processing as taught by Gallery.

Regarding claim 5, Kobayashi further teaches the following: pixels are luminance pixels (see abstract).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melur Ramakrishnaiah whose telephone number is (703) 305-1461. The examiner can normally be reached on M-F 6:30-4:00; every other F Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Curtis Kuntz can be reached on (703)305-4708. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2643

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Melur Ramakrishnaiah
Primary Examiner
Art Unit 2643